

(ii) A 15-pound per square-inch (103.4 kPa) pressure load if the projected surface area of the component is greater than 4 square feet. Any single dimension greater than 4 feet (1.22 meters) may be assumed to be 4 feet (1.22 meters) in length; and

(iii) A 6-inch (0.152 meters) displacement, except where limited by the fuselage contour, from a single point force applied anywhere along the distribution system where relative movement between the system and its attachment can occur.

(iv) Paragraphs (b)(3)(i) through (iii) of this section do not apply to components that are redundant and separated in accordance with paragraph (c)(2) of this section or are installed remotely from the cargo compartment.

(c) An airplane with a maximum certificated passenger seating capacity of more than 60 persons or a maximum certificated takeoff gross weight of over 100,000 pounds (45,359 Kilograms) must comply with the following:

(1) *Least risk bomb location.* An airplane must be designed with a designated location where a bomb or other explosive device could be placed to best protect flight-critical structures and systems from damage in the case of detonation.

(2) *Survivability of systems.* (i) Except where impracticable, redundant airplane systems necessary for continued safe flight and landing must be physically separated, at a minimum, by an amount equal to a sphere of diameter

$$D = 2\sqrt{(H_0/\pi)}$$

(where H_0 is defined under § 25.365(e)(2) of this part and D need not exceed 5.05 feet (1.54 meters)). The sphere is applied everywhere within the fuselage—limited by the forward bulkhead and the aft bulkhead of the passenger cabin and cargo compartment beyond which only one-half the sphere is applied.

(ii) Where compliance with paragraph (c)(2)(i) of this section is impracticable, other design precautions must be taken to maximize the survivability of those systems.

(3) *Interior design to facilitate searches.* Design features must be incorporated that will deter concealment or promote discovery of weapons, explosives, or

other objects from a simple inspection in the following areas of the airplane cabin:

(i) Areas above the overhead bins must be designed to prevent objects from being hidden from view in a simple search from the aisle. Designs that prevent concealment of objects with volumes 20 cubic inches and greater satisfy this requirement.

(ii) Toilets must be designed to prevent the passage of solid objects greater than 2.0 inches in diameter.

(iii) Life preservers or their storage locations must be designed so that tampering is evident.

(d) *Exceptions.* Airplanes used solely to transport cargo only need to meet the requirements of paragraphs (b)(1), (b)(3), and (c)(2) of this section.

(e) *Material Incorporated by Reference.* You must use National Institute of Justice (NIJ) Standard 0101.04, Ballistic Resistance of Personal Body Armor, June 2001, Revision A, to establish ballistic resistance as required by paragraph (b)(3) of this section.

(1) The Director of the Federal Register approved the incorporation by reference of this document under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You may review copies of NIJ Standard 0101.04 at the:

(i) FAA Transport Airplane Directorate, 1601 Lind Avenue, SW., Renton, Washington 98055;

(ii) National Institute of Justice (NIJ), <http://www.ojp.usdoj.gov/nij>, telephone (202) 307-2942; or

(iii) National Archives and Records Administration (NARA). For information on the availability of this material at NARA go to http://www.archives.gov/federal_register/code_of_federal_regulations/ibr_locations.html or call (202) 741-6030.

(3) You may obtain copies of NIJ Standard 0101.04 from the National Criminal Justice Reference Service, P.O. Box 6000, Rockville, MD 20849-6000, telephone (800) 851-3420.

[Amdt. Nos. 25-127; 121-341, 73 FR 63879, Oct. 28, 2008]

EMERGENCY PROVISIONS

§ 25.801 Ditching.

(a) If certification with ditching provisions is requested, the airplane must

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meet the requirements of this section and §§ 25.807(e), 25.1411, and 25.1415(a).

(b) Each practicable design measure, compatible with the general characteristics of the airplane, must be taken to minimize the probability that in an emergency landing on water, the behavior of the airplane would cause immediate injury to the occupants or would make it impossible for them to escape.

(c) The probable behavior of the airplane in a water landing must be investigated by model tests or by comparison with airplanes of similar configuration for which the ditching characteristics are known. Scoops, flaps, projections, and any other factor likely to affect the hydrodynamic characteristics of the airplane, must be considered.

(d) It must be shown that, under reasonably probable water conditions, the flotation time and trim of the airplane will allow the occupants to leave the airplane and enter the liferafts required by § 25.1415. If compliance with this provision is shown by buoyancy and trim computations, appropriate allowances must be made for probable structural damage and leakage. If the airplane has fuel tanks (with fuel jettisoning provisions) that can reasonably be expected to withstand a ditching without leakage, the jettisonable volume of fuel may be considered as buoyancy volume.

(e) Unless the effects of the collapse of external doors and windows are accounted for in the investigation of the probable behavior of the airplane in a water landing (as prescribed in paragraphs (c) and (d) of this section), the external doors and windows must be designed to withstand the probable maximum local pressures.

[Doc. No. 5066, 29 FR 18291, Dec. 24, 1964, as amended by Amdt. 25–72, 55 FR 29781, July 20, 1990]

§ 25.803 Emergency evacuation.

(a) Each crew and passenger area must have emergency means to allow rapid evacuation in crash landings, with the landing gear extended as well as with the landing gear retracted, considering the possibility of the airplane being on fire.

(b) [Reserved]

(c) For airplanes having a seating capacity of more than 44 passengers, it must be shown that the maximum seating capacity, including the number of crewmembers required by the operating rules for which certification is requested, can be evacuated from the airplane to the ground under simulated emergency conditions within 90 seconds. Compliance with this requirement must be shown by actual demonstration using the test criteria outlined in appendix J of this part unless the Administrator finds that a combination of analysis and testing will provide data equivalent to that which would be obtained by actual demonstration.

(d)–(e) [Reserved]

[Doc. No. 24344, 55 FR 29781, July 20, 1990]

§ 25.807 Emergency exits.

(a) *Type*. For the purpose of this part, the types of exits are defined as follows:

(1) *Type I*. This type is a floor-level exit with a rectangular opening of not less than 24 inches wide by 48 inches high, with corner radii not greater than eight inches.

(2) *Type II*. This type is a rectangular opening of not less than 20 inches wide by 44 inches high, with corner radii not greater than seven inches. Type II exits must be floor-level exits unless located over the wing, in which case they must not have a step-up inside the airplane of more than 10 inches nor a step-down outside the airplane of more than 17 inches.

(3) *Type III*. This type is a rectangular opening of not less than 20 inches wide by 36 inches high with corner radii not greater than seven inches, and with a step-up inside the airplane of not more than 20 inches. If the exit is located over the wing, the step-down outside the airplane may not exceed 27 inches.

(4) *Type IV*. This type is a rectangular opening of not less than 19 inches wide by 26 inches high, with corner radii not greater than 6.3 inches, located over the wing, with a step-up inside the airplane of not more than 29 inches and a step-down outside the airplane of not more than 36 inches.

(5) *Ventral*. This type is an exit from the passenger compartment through